Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-28. (Canceled)

29. (New) A method for dispersing a water soluble or hydrophilic substance in a supercritical fluid, comprising
adding a surfactant to the fluid, wherein the surfactant is a block copolymer comprising at least one CO_2-philic block and at least one nonionic hydrophilic block.

30. (New) The method of claim 29, wherein the supercritical fluid is CO_2.

31. (New) The method of claim 29, wherein the supercritical fluid is CO_2 comprising an entrainer in an amount of less than 5%.

32. (New) The method of claim 29, wherein the CO_2-philic block is selected from the group consisting of polymers soluble in supercritical CO_2.

33. (New) The method of claim 29, wherein the block copolymer is a copolymer soluble in supercritical CO_2.

34. (New) The method of claim 33, wherein a minimum solubility of the block copolymer is 0.05% w/w at least one defined temperature between 0°C and 100°C and least one defined pressure, that is greater than the supercritical pressure of CO_2 and less than 70 MPa.

35. (New) The method of claim 29, wherein a number-average molar mass of the block copolymer is between 1000 and 200,000 g/mol.

36. (New) The method of claim 35, wherein a number average molar mass of the hydrophilic block is between 500 and 20,000 g/mol.

37. (New) The method of claim 29, wherein a ratio by weight of the CO_2-philic block to the hydrophilic block is between 1 and 50.

38. (New) The method of claim 29, wherein the CO_2-philic block is selected from the group consisting of fluoropolymers and poly(siloxane)s.

39. (New) The method of claim 38, wherein the fluoropolymers are selected from the group consisting of poly(fluoroether)s, poly(fluoroalkyl acrylate)s and poly(fluoroalkyl methacrylate)s.

40. (New) The method of claim 39, wherein the poly(fluoroalkyl acrylate)s are poly(1,1-dihydroperfluorooctyl acrylate)s or poly(1,1,2,2-tetrahydroperfluorodecyl acrylate)s.

41. (New) The method of claim 29, wherein the nonionic hydrophilic block is selected from biocompatible hydrophilic polymers.

42. (New) The method of claim 41, wherein the biocompatible hydrophilic polymers are selected from the group consisting of polysaccharides, hydrophilic cellulose polymers, poly(vinyl alcohol), polyols and ethylene oxide homo- and copolymers.

43. (New) The method of claim 42, wherein the hydrophilic block is a poly(ethylene oxide).

44. (New) The method of claim 29, wherein the block copolymer is a copolymer composed of a poly(1,1,2,2-tetrahydroperfluorodecyl acrylate)s block and a poly(ethylene oxide) block; a PEO-b-PFDA block copolymer; a PFDA-b-PEO-b-PFDA triblock copolymer or a PEO-b-PFDA-b-PEO triblock copolymer.

45. (New) The method of claim 29, wherein the water-soluble or hydrophilic substance comprise an active principle, wherein the active principle is selected from the group consisting of (i) pharmaceuticals; (ii) cosmetics; and (iii) foodstuffs.

46. (New) The method of claim 45, wherein the pharmaceuticals are selected from the group consisting of analgesics, antipyretics, aspirin and aspirin derivatives, antibiotics, antiinlammatories, antiulceratives, antihypertensives, neuroleptics, antidepressants, therapeutic oligonucleotides, therapeutic peptides and therapeutic proteins.

47. (New) The method of claim 46, wherein the therapeutic peptides and the therapeutic proteins are selected from the group consisting of a protein corresponding to parathyroid hormone, growth hormone, α-interferons, β-interferons, γ-interferons, α-erythropoietin, β-erythropoietin, granulocyte colony-stimulating factor, granulocyte-macrophage colony-stimulating factor, vasoactive intestinal peptide, thyrotopine-releasing hormone, arginine vasopressin, angiotensin, insulin, somatotropin, tissue plasminogen activator, clotting factors VIII and IX, glucosylceramidase, lenograstim, molgramostim, filgrastim, interleukins, dornase alfa, PEG-L-asparaginase, PEG-adenosine deaminase, hirudin, eptacog alfa, nerve growing factors, luteinizing hormone-releasing hormone and its derivatives and analogs, somatostatin and its derivatives, triptorelin, bombesin, calcitonin, gastrin-releasing peptide, growth hormone-releasing factor and amylin.

48. (New) A block copolymer comprising at least one CO_2-philic block and at least one biocompatible block.

49. (New) The block copolymer of claim 48, that is a diblock copolymer or a triblock copolymer.

50. (New) The block copolymer of claim 49, wherein the triblock copolymer corresponds to formula (1)

a first hydrophilic block/ the CO_2-philic block/ a second hydrophilic block (1), wherein the first and the second hydrophilic blocks are identical or different;
or to formula (2)

a first CO_2-philic block/ the hydrophilic block/ a second CO_2-philic block (2), wherein the first and the second CO_2-philic blocks are identical or different.

51. (New) The block copolymer of claim 48, wherein the CO_2-philic block is selected from the group consisting of fluoropolymers and poly(siloxane)s.

52. (New) The block copolymer of claim 51, wherein the fluoropolymers are selected from the group consisting of poly(fluoroether)s, poly(fluoroalkyl acrylate)s and poly(fluoroalkyl methacrylate)s.

53. (New) The block copolymer of claim 52, wherein the poly(fluoroalkyl acrylate)s are poly(1,1-dihydroperfluorooctyl acrylate)s or poly(1,1,2,2-tetrahydroperfluorodecyl acrylate)s.

54. (New) The block copolymer of claim 48, wherein the biocompatible hydrophilic polymers are selected from the group consisting of polysaccharides, hydrophilic cellulose polymers, poly(vinyl alcohol), polyols and ethylene oxide homo- and copolymers.

55. (New) The block copolymer of claim 54, wherein the hydrophilic block is a poly(ethylene oxide).

56. (New) The block copolymer of claim 48, that is a copolymer composed of a poly(1,1,2,2-tetrahydroperfluorodecyl acrylate)s block and a poly(ethylene oxide) block; a PEO-b-PFDA block copolymer; a PFDA-b-PEO-b-PFDA triblock copolymer or a PEO-b-PFDA-b-PEO triblock copolymer.

57. (New) A method for encapsulating an active principle comprising dispersing the active principle in a supercritical fluid by adding a surfactant to the fluid, wherein the surfactant is a block copolymer comprising at least one CO_2-philic block and at least one nonionic hydrophilic block.